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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/889,734 | 07/20/2001 | Stefan Johansson | P137US00 | 9032 |

466 7590 06/06/2002

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EXAMINER

DINH, TUAN T

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2827

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,734

Applicant(s)

JOHANSSON ET AL.

Examiner

Tuan T Dinh

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 3,7-12,17,18 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,13-16 and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's election without traverse of Embodiment I (Figures 1-3) would read all claims of the invention in Paper No. 6 is acknowledged.

Based on figures 1-3, examiner would like to select claims for examination this application. The examination claims are 1-2, 4-6, 13-16, 19-26, and the remaining claims 3, 7-12, 17-18, and 27 are withdrawn as being non-elected from consideration.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The disclosure is objected to because of the following informalities:

Please, change in any single claim of "characterised in that" with bolt to **unbolt**.

For any claim of "characterised in that" change to --characterized in that--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-2, 4-6, 13-16, 19-26 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification is silent regarding "an actuator" claim 1, line 8 and claim 19, line 9, "an actuator, transforming an electrical signal into a mechanical motion" claim 1, lines 8-9, claim 19, lines 9-10, and "a sensor, transforming a mechanical motion into an electrical signal" claim 1, lines 10-11, claim 19, lines 11-12.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 14-16 and 23-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 14 and 23/figures 1-3, it is unclear. What does applicant meant of "said flexible printed circuit board is provided with geometrical structures (16, 18, 20; 32, 33, 34; 40, 42; 44, 46, 48)...and/or to other members of said transducer microsystem?"

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 4-6, 13-16, and 19-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Meny et al. (U. S. Patent 5,170,326).

As best understood to claims 1, 5, 19, 21-22, Meny discloses an electronic module assembly (10) capable of being transducer microsystem and a method as shown in figures 1-6 comprising

a main structural member (14-figure 1, column 2, line 2); and

a number of components (17-figure 1, column 2, line 9) of an electromechanical transducer, physically attached to said main structural member (14), whereby electromechanical transducer being defined as;

a sensor (17), transforming a mechanical motion into an electrical signal, said transducer microsystem being characterized in that

said main structural member is a flexible printed circuit board (14); and

said flexible printed circuit board (14) comprises electrical connections (15, 16, column 2, line 6) to said components (17) of said electromechanical transducer.

As best understood to claim 2, Meny discloses the transducer microsystem as shown in figures 1-6 characterized in that said components (17) of said electromechanical transducer are components of sensors.

As to claims 4, 6, and 20, 26, Meny discloses the transducer microsystem and method as shown in figures 1-6 characterized in that said flexible printed circuit board (14) is elastically deformed (see figure 2) to apply an elastic contact force (column 2, lines 43-55) to at least one of said components (17) of said electromechanical transducer, forming a mechanical contact.

As to claim 13, Meny discloses the transducer microsystem as shown in figures 1-6 characterized in that said flexible printed circuit board (14) comprises polyimide material (column 2, line 2).

As best understood to claims 14-16 and 23-25, Meny discloses the transducer microsystem and method as shown in figures 1-6 characterized in that said flexible printed circuit board (14) is provided with geometrical structure of C- shaped.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsumoto et al., and Scott disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
June 2, 2002


KAMAND CUNEO
PRIMARY EXAMINER